

Historic, archived document

Do not assume content reflects current scientific knowledge, policies, or practices.

UNITED STATES DEPARTMENT OF AGRICULTURE



FARMERS' BULLETIN



Has been rev.
---see rev.ed.
binders at
end of file.

WASHINGTON, D. C.

717

MARCH 4, 1916

Contribution from the States Relations Service, A. C. True, Director.

FOOD FOR YOUNG CHILDREN.¹

By CAROLINE L. HUNT,

Scientific Assistant, Office of Home Economics.

Food for children between three and six years of age should be chosen with reference to their bodily needs, as described in the

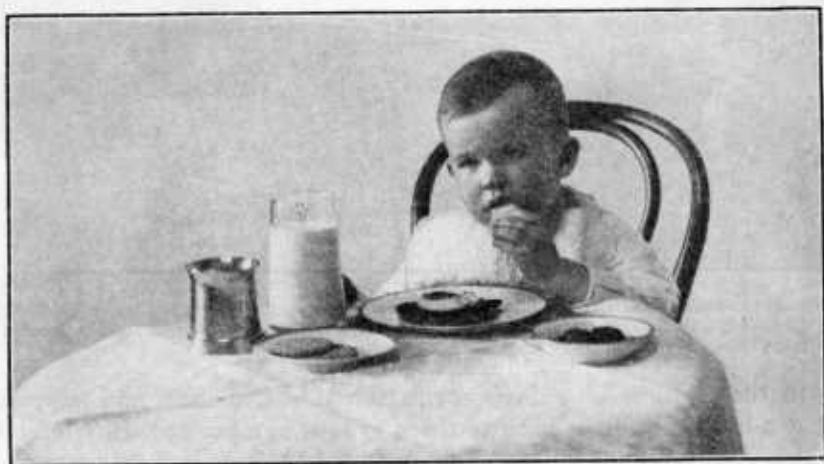


FIG. 1.—A healthy child having a sensible meal. Every child needs clean, wholesome food, well prepared, and served in quantity and variety sufficient for normal growth.

following pages, and should be carefully prepared and attractively served as shown in the above picture.

¹ Prepared under the direction of C. F. Langworthy, Chief, Office of Home Economics.

NOTE.—This bulletin is in accordance with the principles of child feeding now generally accepted by the best authorities, and also embodies the results of work done in the laboratory of the Office of Home Economics of the States Relations Service, U. S. Department of Agriculture. It is specially adapted to the use of mothers who wish some simple and short discussion of the subject expressed in housekeepers' terms.

INTRODUCTION.

A little child who is carefully fed in accordance with his bodily needs (as these are now understood) receives every day at least one food from each of the following groups:

1. Milk and dishes made chiefly of milk (most important of the group as regards children's diet); meat, fish, poultry, eggs, and meat substitutes.
2. Bread and other cereal foods.
3. Butter and other wholesome fats.
4. Vegetables and fruits.
5. Simple sweets.

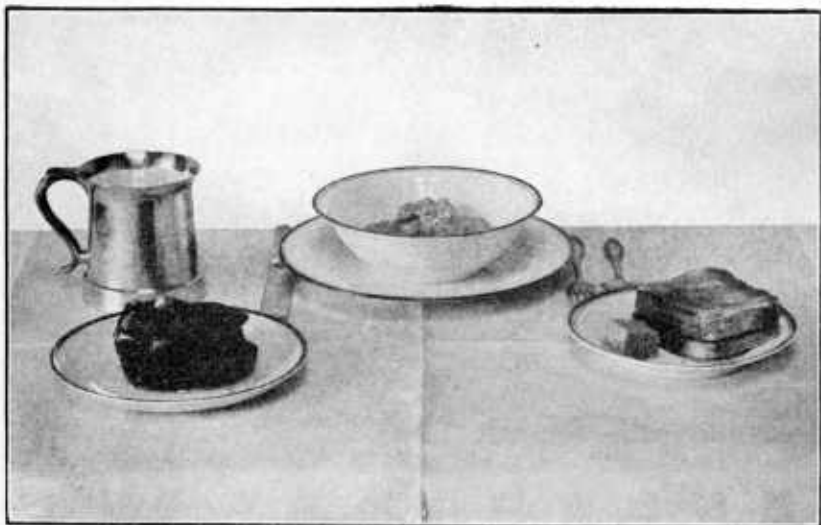


FIG. 2.—A sensible breakfast for a child. The breakfast shown consists of the following: Baked apple (pulp only for the youngest children and for those with whom the skin disagrees) (group 4); cereal mush (group 2); milk (group 1); toast and butter (groups 2 and 3).

In the pictures of a day's meals (breakfast, dinner, and supper) shown in this bulletin each of these groups is represented by a food which is suitable for a little child, each food being numbered to indicate the group to which it belongs. The purpose is to show a day's ration containing enough different kinds of foods to meet all the child's needs. The size of the portions would, of course, depend on the child's age. With usual quantities served the meals should be sufficient.

Many other meals might have been shown, for there is no food in the pictures, except milk, which could not have been replaced by some other wholesome food. Milk, if it can be procured, should form part of the food of every child, except when for some special reason the doctor objects, and this he seldom does.

The pictures may be helpful in preparing children's meals. The one on page 2 shows a breakfast, the one below a dinner, and that on page 5 a supper. The three together will supply food for a day in wholesome and suitable form. These meals are simple and such as a child should like. The quantity served should vary with the age of the child.

The picture of the dinner given below represents the heaviest meal of the three here shown. For little children it is usually considered wise to serve such a meal in the middle of the day rather than at night.

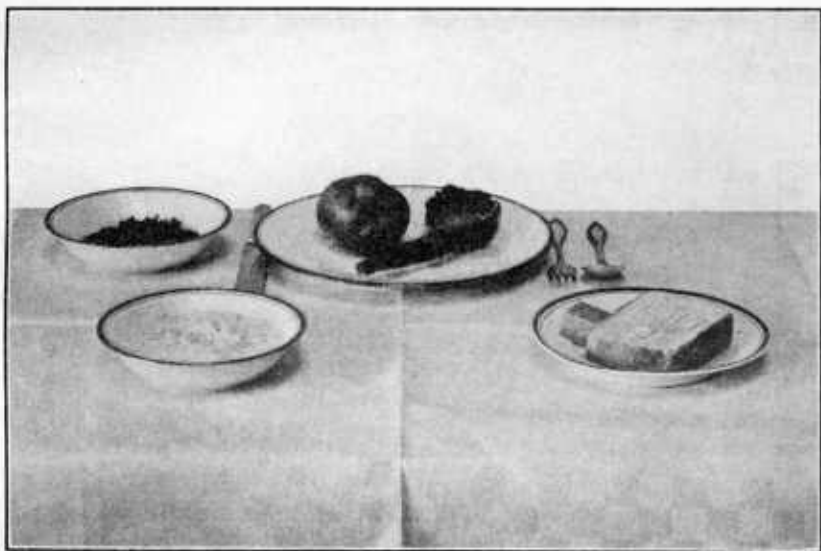


FIG. 3.—A sensible dinner for a child. The dinner shown above consists of the following: Lamb chop (group 1); baked potato (group 4); spinach (finely chopped for youngest children) (group 4); bread and butter (groups 2 and 3); rice with milk and sugar (groups 1, 2, and 5).

The picture on page 5 shows a well-chosen supper for a growing child. The foods are simple and simply cooked, but are the kind liked by most healthy children. As all the pictures show, the service is orderly and neat in every way. This is important because it helps to form neat and orderly habits.

The following bills of fare, like those in the pictures, are simple, easy to prepare, sufficiently varied, and, if well prepared, should taste good. They are so planned that milk and another food from group 1 and a food from each of the other groups will be served at least once a day.

SUGGESTED BILLS OF FARE.

BREAKFAST.

Orange (juice only for the youngest children).

Farina with milk.

Bread and butter.

Applesauce.

Oatmeal with milk.

Toast and butter.

Baked pears (pulp only for the youngest children).

Milk toast.

Cocoa.

Stewed prunes (pulp only for the youngest children).

Corn-meal mush and milk.

Toast and butter.

Grape fruit (juice only for the youngest children).

Milk toast with grated yolk of hard-boiled egg.

Apple (scraped for very little children).

Toast.

Hot milk.

In each case enough milk should be given to make up the required daily amount, which is about a quart.

DINNER.

Meat soup.

Egg on toast.

String beans.

Rice pudding.

Roast beef.

Baked potato.

Asparagus.

Bread and jelly.

Lamb stew with carrots and potato.

Twice-baked bread.

Tapioca custard.

Creamed potatoes.

Green peas.

Stewed plums with thin cereal-milk pudding.

Baked halibut.

Boiled potatoes.

Stewed celery.

Boiled rice with honey or sirup.

Broiled meat cakes.

Grits.

Creamed carrots.

Bread, butter, and sugar sandwiches.

In each case enough milk should be given to make up the required daily amount, which is about a quart.

SUPPER.

Baked potatoes, served with cream and salt, or with milk gravy.

Cookies.

Bread and milk.

Apple sauce.

Sponge cake.

Potato-milk soup.

Twice-baked bread.

Marmalade sandwiches.

Graham crackers and milk.

Baked custard.

Milk toast.

Stewed peaches.

Cup cake.

Celery-milk soup.

Toast.

Floating island.

In each case enough milk should be given to make up the required daily amount, which is about a quart.

Though all the foods mentioned in the bills of fare may be included under five heads, the diet need not be monotonous, for many foods come under each class. The different groups are described in the pages that follow.

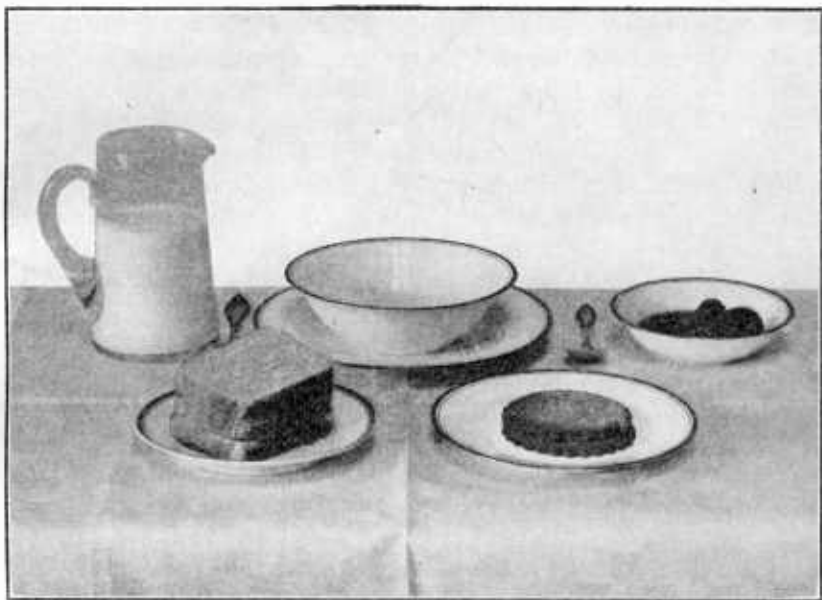


FIG. 4.—A sensible supper for a child. The supper shown above consists of the following: Milk (group 1); Bread (group 2); stewed prunes (pulp only for youngest children) (group 4); plain cookies (omit in case of youngest children) (group 5).

FOOD GROUP NO. 1.—MILK AND DISHES MADE CHIEFLY FROM IT; FISH, POULTRY, EGGS, AND MEAT SUBSTITUTES.

The different foods mentioned in the heading of this group have enough in common to warrant bringing them together. However, milk is such an important food for children that it is desirable to speak of it by itself.

MILK SERVED IN VARIOUS WAYS.

Milk is the natural food of babies and the most important food for young children. A quart of milk a day is a good allowance for a child. The greater part of this is usually given as a drink or served on cereals or in the form of bread and milk. Milk may also be served on fruits that are not very acid (baked apples or pears, berries, and others), in soups, gravies, custard, junket, and other puddings, and may be used in place of water in cooking cereals.

Milk, being a liquid, is sometimes classed with water, tea, and coffee, simply as a beverage, by those who do not understand its value as food. This is a great mistake. If all the water were to be driven off from a quart of tea or coffee, almost nothing would be left, and the little that remained would have little or no value as food. If, on the other hand, the water were driven off from a quart of whole milk, there would be left about half a cupful of the very best food substances, including butter fat, a kind of sugar not so sweet as granulated sugar and known as "milk sugar," and also materials which are needed to make muscles, bones, teeth, and other parts of the body. All these valuable food substances are ordinarily either dissolved or floating in the water of milk.

Besides all this nourishment, milk contains a very small amount of a substance or substances now thought to help the body of the child to make good use of other foods. For this reason milk is often called "growth promoting." Apparently nothing can serve so well as the basis for the diet of the healthy child.

Good whole milk is desirable, but if a mother is obliged to choose between clean milk and rich milk, she had better take the clean milk. Best of all, of course, is clean whole milk, but if that can not be obtained it is better to use clean fresh skim milk than dirty or questionable whole milk. A quart of skim milk, even separator skim milk, contains about a third of a cupful of solid food, which is nearly all there was in the whole milk, except the butter fat.

When it is absolutely impossible to get fresh milk, condensed, powdered, or evaporated milk may be used, but before doing this parents should try in every way to get fresh milk for their children.

Compared with most other foods milk contains much lime but very little iron. Spinach and other green vegetables and egg yolks are, on the other hand, very rich in iron. This is one reason why combinations of egg yolks and milk and of vegetables and milk are mentioned so often in this bulletin.

When milk is given to babies the chill is usually taken from it. It is safe to do this for all young children. When milk is used as a drink it should be sipped, not gulped down.

Besides being served as a beverage, milk is often combined with many other foods, as follows:

BREAD AND MILK.

This may well be the chief, if not the only, dish in the supper of little children. If the milk is not very rich, the bread should be spread with butter. Use well-baked bread, at least a day old, or toast, or occasionally crackers.

CEREALS AND MILK.

Thoroughly cooked cereals served once a day for the first course and once a day for dessert encourage the use of milk. Directions for preparing them will be found on page 15. Any cereal may be cooked in milk besides being served with it. Skim milk which might otherwise be thrown away may be used for the purpose. Rice, cooked in an uncovered double boiler, or in a pan in a very "slow" oven, can be made to absorb about six times its volume of skim milk. To cook a cupful of rice in this way instead of in water may be considered equivalent, so far as tissue-forming materials are concerned, to serving it with half a pound of lean beef.

MILK TOAST.

The following is a good method for making milk toast. Put on the table hot crisp toast or twice baked bread (see p. 15) and a pitcher of hot milk, slightly salted. One-fourth teaspoonful of salt to a cupful of milk is sufficient. Pour the milk over the toast as needed, using hot bowls or deep saucers for serving. This is the easiest way of serving milk toast, and, if care is taken to have all the dishes hot and to salt the milk, it is usually acceptable. A supply of twice-baked bread can be kept on hand and heated as needed to crisp it.

Another way to make milk toast is to thicken milk and pour it over toast. For 1 cup of milk allow $1\frac{1}{2}$ level teaspoons of flour and $\frac{1}{4}$ teaspoon of salt. Make a smooth paste out of the flour, salt, and a little of the milk. Heat the rest of the milk; add the flour and milk mixture and boil for about 5 minutes, stirring constantly, or cook 20 minutes in a double boiler, stirring constantly at first and frequently later on. If skim milk is used, a level teaspoonful of butter or bacon fat should be added after the gravy is prepared.

An easier and quicker method of making the sauce or "milk gravy" is to cook the flour thoroughly in a tablespoonful of fat before adding the milk. This, however, is not thought to be so wholesome as the kind of gravy in which the flour is cooked in the milk.

Milk gravy may be combined with dried beef or salt codfish which has been cut into small pieces and soaked in warm water, or with small pieces of tender meat, chicken, fish, or vegetables. Such gravy may be served with toast, with baked or boiled potatoes, or with boiled rice or other cereals. Dishes of this kind are more suitable for dinner than for supper.

Milk toast with the yolk of a hard-boiled egg grated over it makes an attractive dish. The whites of the hard-cooked eggs are not suitable for a young child nor for any child unless they are finely chopped or unless the child can be made to chew them well.

COCOA.

For variety, milk flavored with cocoa may be served. Prepared cocoa is the most convenient, but cracked cocoa shells or nibs, which require long boiling, may be used. A warm drink, made chiefly out of cocoa and water, is not to be confused with the more nourishing drink made by flavoring milk with cocoa, but it has its uses. Like clear soups, which contain little food in themselves, it may lead the child to eat freely of bread and other needed foods.

MILK SOUPS.

Another good way to serve milk to children is in soups. Milk-vegetable soups are made from cooked vegetables, chopped or strained, which in this form may be given to even the youngest children, and milk (whole or skim) slightly thickened. The vegetable may be asparagus, peas, beans of various kinds, celery, potatoes, turnips, carrots, spinach, kale, chard, beet roots or greens, parsnips, lettuce, cress, cauliflower, or almost any other.

GENERAL RECIPE FOR MILK-VEGETABLE SOUPS.

2 cupfuls of milk.

1 tablespoonful of flour.

1 tablespoonful of butter.

Salt.

$\frac{3}{4}$ of a cupful of a thoroughly cooked vegetable, finely chopped, mashed, or put through a sieve.

Thicken the milk with the flour as for milk gravy; add the other ingredients. If the soup is too thick, as it may be if the vegetable is starchy, thin it with milk or water. Milk tomato soup is not recommended for the youngest children. When it is served a little soda should be added to prevent the milk from curdling.

MILK STEW.

1 quart of milk.

1 cupful raw potatoes cut into small pieces.

2 tablespoonfuls of butter or bacon fat.

1 cupful of codfish cut into small pieces or just enough to flavor the stew.

Soak the fish in lukewarm water until it is soft and the salt removed. Cook the potatoes in water until tender, drain them, add the milk and codfish, and bring to the boiling point; add the butter, and salt to taste.

In place of the codfish any other salt or fresh fish, oysters, or a little chipped beef may be used. Or the fish may be omitted and the soup made savory and palatable by adding a few drops of onion juice, or a vegetable cut into small pieces and cooked thoroughly.

CEREAL-MILK PUDDINGS.

Puddings made with milk and bread, rice, or some other cereal food, have long been recognized as desirable in the child's diet.

Such milk puddings as old-fashioned rice or Indian pudding may be the means of serving much milk in a wholesome way. From the following recipe for rice pudding other recipes can be easily made, the proportions in all cases being about the same:

RICE PUDDING.

1 quart of milk.
 $\frac{1}{3}$ cupful of rice.
 $\frac{1}{3}$ cupful of sugar.

$\frac{1}{2}$ teaspoonful of salt.
 $\frac{1}{8}$ teaspoonful of ground nutmeg, or cinnamon, or the grated rind of $\frac{1}{4}$ of a lemon.

Wash the rice thoroughly, mix the ingredients, and bake three hours or more in a very slow oven, stirring occasionally at first.

GENERAL RECIPE FOR CEREAL-MILK PUDDINGS.

For a quart of milk allow one-third of a cupful of any coarse cereal (rice, corn meal, cracked wheat, oatmeal, or barley) and one-third of a cupful of brown, white, or maple sugar, sirup, honey, or molasses; one-half teaspoonful of salt; one-eighth teaspoonful of spice. The flavoring may be omitted when honey or molasses is used.

The above recipe makes quite a large pudding. It is often convenient to make a smaller one, and enough for a child's dinner can be made in the double boiler, allowing 2 level or 1 rounding tablespoonful each of cereal and of sugar (or other sweet) to a cupful of salted and flavored milk. Cook an hour or more without covering.

These puddings, if made thin, may be poured over stewed prunes or other cooked fruits, and are a good and economical substitute for the cream or soft custard usually used for that purpose.

CUSTARD AND OTHER MILK PUDDINGS.

There are many other milk dishes which are used in the same way as this milk and cereal pudding. Recipes for some of them follow:

Junket, or "rennet custard," is milk that has been coagulated or curdled, a process not unlike one of the first steps in digestion. The curdling is brought about by the addition of "junket tablets" to the milk. Milk containing rennet will, if not disturbed, "set" in one piece resembling a custard. Junket differs little from milk in food value except for the presence of the sugar used for flavoring, but it gives variety to the diet. If served very cold it is refreshing in warm weather.

JUNKET.

2 cupfuls of milk.
 $\frac{1}{4}$ cupful of sugar, honey, or sirup.
 1 junket tablet.

$\frac{1}{8}$ teaspoonful of salt.
 A few grains of nutmeg or cinnamon.

Warm the milk to about the temperature of the body, crush the tablet, and add it with the other ingredients to the milk. Pour into one large or several small dishes and place in a warm (not hot) place to harden. Cool before serving.

BOILED CUSTARD.

3 egg yolks.
2 cupfuls of milk.
 $\frac{1}{4}$ cupful of sugar, honey, or sirup.

$\frac{1}{8}$ teaspoonful of salt.
Flavoring.

Heat the milk in a double boiler. Thoroughly mix the eggs and sugar and pour the milk over them. Return the mixture to the double boiler and heat it until it thickens, stirring constantly. Cool and flavor. If the custard curdles, remove it from the fire and beat with a Dover egg beater. This custard may be served in place of cream on many kinds of dessert.

FLOATING ISLAND.

In this dish the whites of eggs left over from boiled custard can be used to serve with it. Beat the whites until stiff; sweeten them a little; and cook them in a covered dish over water which is hot but not boiling; or cook them on top of the hot milk which is to be used in making custard. Lift them out with a wire egg beater or split spoon, and place on top of the custard. Decorate with small bits of jelly.

TAPIOCA CUSTARD.

Tapioca custards may be made as follows: Add to the list of ingredients for boiled custard one-fourth cupful of pearl tapioca. Soak the tapioca in water for an hour or two, drain it, and cook in the milk until it is transparent. Proceed as for boiled custard.

BAKED CUSTARD.

In making allow 1 egg and 2 level teaspoonfuls of sugar and a few grains of salt and of nutmeg for each cupful of milk. Beat the eggs slightly and add the other ingredients. Bake in cups set in a pan of water in a moderate oven.

SIMPLE ICE CREAMS.

In the way they are used, ice cream and frozen custard may be grouped with the puddings. Plain ice cream made out of thin cream, sweetened and flavored, or out of cream and custard mixed, may be given to children occasionally.

A good ice cream may be made as follows: Allow one-fourth cupful of sugar to each cupful of thin cream (half milk and half cream); flavor and freeze.

A frozen custard, commonly called by housekeepers "ice cream" or "French ice cream," which contains eggs as well as milk and cream, may be made as follows: For each half cupful of milk allow one-fourth cupful of sugar, one or two egg yolks or one whole egg, and a half cupful of cream. Make a custard out of all the ingredients but the cream. When it is cool, flavor it, add the cream, and freeze.

CARAMEL FLAVORING FOR USE IN CUSTARDS, ICE CREAMS, AND OTHER DESSERTS.

An economical flavoring for any of the above desserts may be made by browning or caramelizing ordinary sugar. To each cupful of sugar add one-fourth of a cupful of water. Heat until well browned, stirring constantly even after the dish has been taken from the fire, and until the danger of burning in the hot dish is passed. Before the mixture hardens, add hot water and cook until it is about the consistency of thick sirup. Bottle and save for use as needed.

MEAT, FISH, POULTRY, EGGS, AND MEAT SUBSTITUTES.

The other foods included in group 1 with milk (considered by far the most important of them all for children) are meat, fish, poultry, eggs, and meat substitutes.

In some families children do not get enough meat and eggs; in others they get too much. A good general rule commonly followed is to give a child 2 years old or over, an egg every other day and about the same amount (2 ounces) of meat, fish, or poultry on the days that come between. If for any reason meat is omitted from the child's diet special care must be taken to see that other suitable foods take its place—preferably an extra amount of milk or eggs.

Broiling and roasting are the best methods of preparing tender meat. Tough meat should be stewed or prepared in a fireless cooker, or first chopped and then broiled.

It is important to teach children to chew meat and other foods properly.

Fried meats, particularly those which are pan fried or cooked in a small amount of fat, should not be given to young children. One reason for this is that they are likely to be overcooked and tough, at least on the outside, and so are likely not to be properly chewed and to be swallowed in large pieces. Another reason is that the fat used in frying and also that which tries out of the meat is likely to be scorched and changed in composition. When this is the case, it is almost certain to be harmful.

Some recipes for cooking meat for children follow:

BROILED CHOPPED MEAT.

Many cuts of meat too tough to be broiled whole may be prepared very satisfactorily by being chopped, salted, and broiled. Allow about one-half teaspoonful of salt to a pound of meat. For very little children the meat should be scraped instead of being chopped, for in this way the connective tissue is taken out. An egg or a little milk may also be added. The most important point is careful handling, for if the meat is pressed together it becomes tough and hard. If a wire broiler is used, the cakes should not be squeezed between the two sides. To avoid this, lay them on top of the broiler and turn them with a knife and fork.

MEAT STEWS.

Stews made out of meat and vegetables offer a very great variety of dishes, good in themselves and good also because they encourage the eating of bread. The meat used should, of course, be in good condition but need not be from a tender cut. The lower-priced cuts may be used with good results, provided they are made tender by long, slow cooking. Any vegetable may be added, including the tougher parts of lettuce, and the leaves of celery. Rice, barley, macaroni, or even crusts of stale bread may be used in the stew to give variety. A stew containing a little meat, with one or more vegetables and a cereal, comes near to supplying all the needed foods, other than milk.

MEAT STEW.

2 pounds of one of the cheaper cuts of beef.	$\frac{1}{2}$ onion, chopped.
4 cups of potatoes cut into small pieces.	$\frac{1}{4}$ cup of flour.
$\frac{3}{4}$ cup each of turnips and carrots cut into $\frac{1}{2}$ -inch cubes.	Salt.

Cut the meat into small pieces, cover with boiling water, boil for five minutes, and then cook at a lower temperature until the meat is tender. This will require about three hours on the stove or five hours in the fireless cooker. Add the carrots, turnips, and onions, and salt during the last hour of cooking, and the potatoes 20 minutes before serving. Thicken with the flour diluted with cold water. If the dish is made in the fireless cooker, the mixture must be reheated when the vegetables are put in.

There is much to be said in favor of keeping a soup pot on the stove all the time, provided great care is taken not to allow the contents to grow stale. Into this pot can go clean portions of uncooked food and also clean foods left from the table, such as meat, milk, mashed potatoes, or other vegetables, crusts, cold cereal mushes, and even fruits. Soups made from such materials may not have great nutritive value, but, like those made out of materials bought for the purpose, they encourage the use of a large amount of bread, particularly if carefully seasoned.

POULTRY.

Chicken or turkey can be used for variety in a child's diet and are palatable stewed and served with rice. If roast chicken is used, select portions which are tender. It is well not to give a young child either highly seasoned stuffing (dressing) or rich gravy.

FISH.

The use of cured fish, fresh fish, and oysters in stews has been spoken of above. Boiled or stewed fish is also good for variety.

Eggs.

Eggs are especially useful food for young children. The chief point to remember in preparing them for children is that they must not be overcooked or they are likely to cause indigestion, as experience has shown. Everyone knows how the heat of cooking hardens the egg, and it is easy to understand why the digestive juices might have difficulty in penetrating such hard substance as the white of a hard-boiled egg. Overcooked yolks are also thought to be hard to digest. However, when eggs are cooked in the shell, the heat reaches the white before it does the yolk, and so there is more danger of the white being overcooked than of the yolk. The best ways of serving eggs for children are poached, soft-boiled, or coddled, though they may be scrambled for a change if one is careful not to scorch the fat used or to overcook the egg.

CODDLED EGGS.

Many means have been suggested for cooking eggs in such a way that the yolks will be cooked and the whites will not be overcooked. One of the most satisfactory is by coddling and is done as follows: Allow a cupful of water to each egg, bring the water to the boiling point, remove it from the fire, put in the eggs, cover the dish closely, and leave the eggs in the water for about seven minutes. There is some uncertainty about this method, for eggs differ in weight and also in temperature at the time the cooking begins. On the whole, however, this method can be more depended on than others. Good results can be obtained by pouring hot water over eggs, if the same dish with the same amount of water is always used, but each cook must make her own rules.

MEAT SUBSTITUTES.

Milk and eggs, as stated above, are common meat substitutes. Among vegetable foods, dried beans, peas, lentils, and cowpeas, which are often classed together and called legumes, are the best substitutes for meat in the diet of older people, chiefly because they have large amounts of nitrogen needed for muscle building. In this respect they have some advantage, though not a great one, over cereals. Beans and the other legumes are not to be recommended for young children except when milk, meat, eggs, fish, and poultry are not to be obtained. When used they should be cooked until they are reduced to a mush. Since the skins are likely to be tough, it is well to put the cooked legumes through a sieve.

A general recipe for soups made from beans, peas, lentils, cowpeas, and other legumes follows:

SOUP FROM DRIED BEANS OR OTHER LEGUMES.

1 cup dried legumes.	2 tablespoonfuls of flour.
1 quart of water or soup stock.	Salt and other flavoring.
2 tablespoonfuls of butter or savory fat.	

Soak the dried legumes in water over night. Drain, add the water or stock, cook slowly on top of the stove for three hours or in a fireless cooker for four or five hours or until tender. Renew the water as it boils away. Strain and thicken with the fat and flour rubbed together. These soups may be flavored in many ways. Sometimes a tomato, onion, a few celery tops, a sprig of parsley, or a mixture of vegetables is boiled with the beans or peas, or just before serving a few drops of onion juice, a little celery salt, or one-half level teaspoonful of curry powder is added. Sometimes the water used is that in which ham or other meat has been boiled, but in such cases care must be taken not to have the liquid too fatty.

FOOD GROUP NO. 2.—BREAD AND OTHER CEREAL FOODS.

Cereal foods of some sort are used by children practically all over the world. Bread is the commonest cereal food in this country, though cereal mushes are also very generally used. Well-baked bread and thoroughly cooked breakfast cereals are both good for children and with milk should make up a large part of the diet. These two foods, bread and breakfast cereals, provide almost the same kinds of nourishment. Bread may therefore take the place, to a certain extent, of cereal mushes and cereal mushes may take the place of bread, but neither can take the place of milk, meat, eggs, fruits, and vegetables.

An ordinary slice of bread (a $\frac{3}{4}$ -inch slice cut from an ordinary loaf) is equal in food value to about half a cupful of boiled or steamed cereal and to about a cupful of puffed or flaked cereal. The mother who must feed her child very economically should calculate the cost of each and decide which is cheapest.

The relation of food to the condition of the bowels is an important matter. Grains, particularly those containing the outer or branny layers or coats, are laxative; so, too, are such mildly acid fruits as apples, oranges, and grapefruit. So far, therefore, as the important matter of preventing constipation is concerned, coarse grains and mildly acid fruits serve the same purpose. When fruits are to be obtained in abundance, the kind of cereal served is not of great importance. When they are not, the coarser cereals should be used. In the case of both cereals and fruits, it is possible to overdo. Sometimes the coarser parts, such as bran and skin, do not agree with the child and, under these circumstances, they should be removed from the food before it is served. Some mothers find it necessary to strain oatmeal porridge, for example, and to remove the skins of apples.

BREAD.

The yeast-raised bread given to young children should be at least a day old or should be toasted or twice baked. Most hot breads are

likely to be swallowed in large pieces and are therefore not desirable. Hot breads which are almost all crust, like thin tea biscuits or crisp rolls, are least likely to cause trouble.

MILK TOAST.

This very common bread dish has been discussed under milk. (See p. 7.)

TWICE-BAKED BREAD.

Bread cut or torn into small pieces and heated in a very slow oven until thoroughly dried and very delicately browned is good food for children. The warming oven of a coal stove is about hot enough for this purpose. In the case of gas ovens it is often difficult to get the gas low enough without having the door open a little way. The advantage of tearing instead of cutting the bread is that it makes it lighter in texture and easier to eat. The crust can be torn off from all but the ends of a loaf of bread in one piece. This crust should be torn into pieces about 2 inches wide. The inside of an ordinary loaf of bread will make 16 pieces of convenient size. Tear first across the loaf and then tear each half into eight pieces. It is usually necessary to make a small cut first in order to start the tearing. It is well to keep the crusts separate, as otherwise they are likely to get too brown. Such bread will need to be reheated before being served unless it is kept in a warm place, like a warming oven.

The above is also a good way to use stale bread. Some people crush it and use it with milk as a breakfast food.

BREAKFAST CEREALS.

Cereal mushes and other breakfast cereals are very common foods. Almost all of the well-known grains are used for this purpose, and there are many such products, owing to differences in manufacture.

Except when used for dessert, cereal mushes and ready-to-eat cereals should be served with milk and with very little, if any, sugar. If the cereals are heavily sweetened, children are likely to eat so much that they neglect other and much-needed foods. If carefully salted, mushes are more likely to satisfy the taste without sugar than otherwise. Well-cooked cereals with milk or stewed fruit or a little molasses, sirup, honey, or sugar make good desserts for dinner, lunch, or supper. If preferred, dried fruits, like dates and raisins, may be cooked with the cereal to sweeten it and to give flavor.

COOKING CEREAL BREAKFAST FOODS.

It is hard to give general rules for cooking cereals, for there are so many kinds, but it is safe to say that there is no danger of overcooking and much danger of undercooking them. Some grains need longer cooking than others—corn meal, for example, needs at least

three hours and rice hardly more than half an hour. In general, whole grains, like whole wheat, or grains more or less finely broken, like cracked wheat, require longer cooking (three hours at least) than more finely-ground grains, such as farina (which should be cooked one hour at least). Breakfast foods made from grains with the outer coverings left on require more cooking than those with the outer covering removed—whole barley, for example, more than pearl barley. Many cereal foods, particularly the rolled and flaked types, have been partially cooked at the factory. These require less cooking in the home than those which have had no such treatment; but if they are to be served to children such cereals should be cooked at home for at least an hour. There are also cereal breakfast foods which have been still more thoroughly cooked at the factory, either by parching in addition to flaking or by some other special method. These are improved by putting them into the oven long enough at least to crisp them.

Oatmeal, corn meal, and many other granular cereals can be put directly into cold water and cooked satisfactorily in a double boiler without stirring, the method being particularly good in the case of corn meal, which is likely to be lumpy if stirred into hot water. A convenient method for cooking cereals is to mix with the usual quantity of water, bring to the boiling point, boil for three or four minutes, and then put into a fireless cooker and leave 10 or 12 hours. Porridge or mush made in this way must be reheated before serving.

The quantity of water required differs with the cereal. A cupful of rolled oats requires at least 2 cupfuls of water; oatmeal or corn meal, 4 cupfuls; and rice, 3 cupfuls.

A level teaspoonful of salt to a cupful of cereal will usually be right, but it is well to experiment a little with an unfamiliar cereal, since failure to salt mushes properly very often leads children to dislike them.

FOOD GROUP NO. 3.—BUTTER, CREAM, TABLE OIL, AND OTHER FATTY FOODS.

Fat is an important part of the food of children. This is not surprising, for it is found in considerable amounts in human milk, the natural food for babies. Butter, which consists chiefly of separated milk fat, and cream, which is rich in milk fat and also in the other nourishing substances of milk, are both wholesome. Salad oils of various kinds (olive, cottonseed, peanut, and others) may be given to children in small amounts. Those who are not used to table oil must often be trained to like it. This can usually be done by introducing it very gradually into the diet. A good way to serve it is on spinach and other greens or on tender salad vegetables.

There is more than an ounce of fat (at least $2\frac{1}{2}$ level tablespoonfuls) in a quart of whole milk. If the healthy child is given a quart of milk, has butter on its bread, and meat or an egg once a day, he gets enough fat and that which he receives is in wholesome form. It is well, therefore, not to give such fatty foods as pastry, fried meats and vegetables, and doughnuts or rich cakes, for in these the fats are not in so good a form for children, as experience has shown. If the child is constipated, the occasional use of cream or salad oil is desirable, for fat in abundance is laxative.

Bacon or salt pork, cut very thin and carefully cooked, may be given occasionally, but thick pieces with much lean are not desirable. In preparing bacon or salt pork it is very important not to burn the fat. To avoid this they should be cooked in one of the following ways: Put the slices on a broiler or wire frame over a pan; place the pan into a hot oven and cook long enough to remove most of the fat. Or keep a pan on purpose for cooking bacon on top of a stove and let the fat which fries out of it collect in the pan, taking care that none is burned. In time so much fat will collect that bacon can be dropped into this hot fat and will be less likely to burn than if placed on a hot pan.

FOOD GROUP NO. 4.—VEGETABLES AND FRUITS.

Two very valuable kinds of food are here grouped together, namely, vegetables and fruits. This is done because they are similar in that both kinds supply iron, lime, and other mineral matter to the body, and also mild acids (not always in such amounts that one can taste them), such as those which are found in oranges, apples, and tomatoes.

Vegetables are an important but often a neglected part of a child's diet. They should be served at least once a day, as they help to keep the bowels in good condition. Several of the ways of accustoming the child to the taste of unfamiliar vegetables have already been suggested here. They may be used as flavoring for soups and stews, may be added to milk or meat stews, or served with meat gravy. If gravy is used, it should not be too fat nor made with scorched fat.

Young children may be given the young and tender parts of celery and lettuce, a satisfactory way of serving being in the form of sandwiches. For this purpose they should be slightly salted and the celery should be chopped or cut into small pieces.

All vegetables, whether served raw or cooked, should be washed with great care. Large vegetables like potatoes and carrots should be scrubbed with a brush. Greens should be washed leaf by leaf under running water, or in a large amount of water. In the latter any sand which clings to them is likely to sink. To prevent it from

again getting on the vegetables lift them from the water instead of pouring the water off.

Most vegetables when served as a separate dish should be either steamed, boiled, baked, or stewed. If the supply of fresh vegetables is not generous, the juice in which they are cooked should be used with them as far as possible, or put into soups or stews.

Experience has shown that vegetables, particularly green vegetables, are at their best when cooked until tender, but not until completely wilted. Spinach requires cooking from 20 to 30 minutes.

Vegetables should be served either quite simply or with a little milk, cream, or butter, to improve or vary the flavor. As said before, oil may be served on greens instead of butter. These simple methods are better than complicated ones like frying or scalloping. For the smallest children such vegetables as greens should be finely chopped, and if the tougher portions of other vegetables, the skins of green peas, for example, are found to disagree with a child, these portions should be removed by putting the cooked vegetable through a sieve. No such vegetables as raw radishes or cucumbers, which might easily be swallowed in large pieces, should be given to small children.

Fruits, which with vegetables make up group 4, are also very important in the child's diet. They supply mild acids, and they are important for their flavor, for their laxative effects, and no doubt for other reasons also. This laxative effect is well recognized in the very general use of orange juice, prunes, and apples. Then, too, the fruits, like the vegetables, have mineral elements which the body requires.

Fruits should be served in some form at least once a day. In general, the same rule should be followed as for vegetables in deciding in what form they should be served. Fruit juices and the pulp of cooked fruit, baked apples and pears, and stewed prunes, for example, are safest. Whether the skins should be given depends partly on the age and health of the child and partly on the way the fruit is prepared. If the skins are very tender, they are not likely to cause trouble, except with very young children. When apples and pears are baked the skins can be made tender by frequent basting.

FOOD GROUP NO. 5.—SIMPLE SWEETS.

Simple sweets are such things as lump sugar, maple sugar, sirups, honey, and plain candy, and those foods in which sugar is combined in simple forms with fruit juices (in lemonade, water ice, jelly, etc.), with flour or starch, as in plain cakes (cup cake, sponge cake, cookies), and with fruit, as in jams, marmalades, and similar things. Sweets which contain much fat, like rich cakes and pastry, and foods which are made rich with nuts or dried or candied fruits, or those which are highly flavored or spiced, can not be classed as simple sweets.

Sugar is a desirable part of the diet, and the only objection which can be raised to its use in reasonable amounts in a mixed diet is that it is sometimes allowed to take the place of foods which come under the first four groups mentioned in this bulletin, and so spoils the child's appetite for those other important things. Under these conditions it is harmful, because its improper use has led to bad food habits. Sweets should not be given between meals or during the first course of a meal. Careful mothers who forbid their children eating candy at odd times sometimes give one or two pieces of wholesome candy as a "treat" with dessert at dinner.

A REVIEW.

In the foregoing pages some general principles which should govern the young child's diet have been stated and facts given about foods the child should have and about cooking them.

At the close of the day the mother might ask herself questions like the following to make sure that she has taken into account the things to which her attention has been directed:

Did each child take about a quart of milk in one form or another?

Have I taken pains to see that the milk that comes to my house has been handled in a clean way?

If I was obliged to serve skim milk for the sake of cleanness or economy, did I supply a little extra fat in some other way?

Were the fats which I gave the child of the wholesome kind found in milk, cream, butter, and salad oils, or of the unwholesome kind found in doughnuts and other fried foods?

Did I make good use of all skim milk by using it in the preparation of cereal mushes, puddings, or otherwise?

Were all cereal foods thoroughly cooked?

Was the bread soggy? If so, was it because the loaves were too large, or because they were not cooked long enough?

Did I take pains to get a variety of foods from the cereal group by serving a cereal mush once during the day?

Did I keep in mind that while cereals are good foods in themselves, they do not take the place of meat, milk, eggs, fruit, and vegetables?

Did I keep in mind that children who do not have plenty of fruit and vegetables need whole-wheat bread and whole grains served in other ways?

Did each child have an egg or an equivalent amount of meat, fish, or poultry?

Did any child have more than this of flesh foods or eggs? If so, might the money not have been better spent for fruits or vegetables?

If I was unable to get milk, meat, fish, poultry, or eggs, did I serve dried beans, or other legumes thoroughly cooked and carefully seasoned?

Were vegetables and fruits both on the child's bill of fare once during the day? If not, was it because we have not taken pains to raise them in our home garden?

Did either the fruit or the vegetable disagree with the child? If so, ought I to have cooked it more thoroughly, chopped it more finely, or have removed the skins or seeds?

Was the child given sweets between meals, or anything that tempted him to eat when he was not hungry?

Was he allowed to eat sweets when he should have been drinking milk or eating cereals, meat, eggs, fruit, or vegetables?

Were the sweets given to the child simple, i. e., unmixed with much fat or with hard substances difficult to chew, and not highly flavored?

Was the child made to eat slowly and chew his food properly?

A young child may be considered well fed if he has plenty of milk, bread, and other cereal food; an egg once a day or its equivalent in flesh foods; a small portion each of carefully prepared fruits and vegetables, with a small amount of sweet food after his appetite for other foods is satisfied. If there is too much or too little of any of these, his diet is one sided.